

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 – 33. (Canceled)

34. (Currently Amended) A method of providing load balancing ~~among host servers~~ using a load balance switch and a plurality of site switches that each couple at least one ~~of the host servers~~ ~~server~~ to a network, the method comprising:

~~configuring, at one of said site switches, a private virtual IP address associated with said at least one host server corresponding to said site switch;~~

~~obtaining at one of said site switches mapping information indicative of a mapping that provides a translation between said a private virtual IP address, configured at said site switch and associated with said at least one host server corresponding to said site switch, and a public virtual IP address; and~~

~~providing said mapping information public virtual IP address from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as a virtual IP address configured at being associated with said site switch rather than treating said public virtual IP address as a real IP address and to enable said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address.~~

35. (Currently Amended) The method of claim 34 wherein providing said ~~mapping information public virtual IP address~~ from said site switch to said at least one load balancing controller includes providing said ~~mapping information public virtual IP address~~ to a

load balancing controller located at said load balance switch, ~~to enable said load balance switch to balance traffic among said site switches using said load balancing algorithm.~~

36. (Currently Amended) The method of claim 35 wherein providing said ~~mapping information~~public virtual IP address from said site switch to said at least one load balancing controller further includes providing said ~~mapping information~~public virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance traffic among ~~sites~~plural ones of said at least one host server corresponding to ~~associated with~~said site switch and associated with said private virtual IP address.

37. (Currently Amended) The method of claim 34 wherein public virtual IP addresses received by said load balancing controller as part of reply to a query for network addresses and that do not have ~~corresponding~~ indication in said address record as being ~~configured as virtual IP addresses at any of~~associated with corresponding said site switches, are treated as real IP addresses by said load balancing controller and are excluded from having applied thereto any metric of ~~said a~~load balancing algorithm that is usable with virtual IP addresses.

38. (Currently Amended) The method of claim 34 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address, said at least one metric is-including an active bindings metric that prefers a virtual IP address, ~~associated with any of~~configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

39. (Currently Amended) A method of providing load balancing ~~among host servers~~ using a load balance switch and a plurality of site switches that each couple at least one ~~of the host servers~~ ~~server~~ to a network, the method comprising:

receiving, at said load balance switch, ~~mapping information indicative of a mapping between a public virtual IP address and that is mapped to~~ a private virtual IP address configured at one of said site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch;

updating an address record of said load balance switch to indicate ~~said received public virtual IP address as a virtual IP address configured at~~ being associated with said site switch ~~rather than treating said public virtual IP address as a real IP address~~; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

40. (Currently Amended) The method of claim 39 wherein public virtual IP addresses received by said load balance switch ~~as part of reply to a query for network addresses and that do not have corresponding indication in said address record as being configured as virtual IP addresses at any of~~ associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto ~~any said at least one metric~~ of said load balancing algorithm that is usable with virtual IP addresses.

41. (Currently Amended) The method of claim 39 wherein receiving said public virtual IP address, at said load balance switch, ~~said mapping information~~ includes receiving said public virtual IP address at said load balance switch ~~instead of said private virtual IP address~~ ~~from said site switch, which is remote from said load balance switch~~, for entry into said address record.

42. (Currently Amended) The method of claim 39 wherein said at least one metric ~~is~~ includes an active bindings metric that prefers a virtual IP address, ~~associated with any~~

~~of-configured at respective~~ said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

43. (Currently Amended) An article of manufacture, comprising:

~~a machine readable storage~~ medium at a site switch and having instructions stored thereon that are executable by ~~a processor to provide~~ said site switch to enable load balancing ~~among host servers using a load balance switch and a plurality of site switches~~ plural ones of said site switch that each couple at least one ~~of the host servers~~ server to a network, by:

obtaining at ~~one of~~ said site ~~switches~~ switch mapping information ~~indicative of a mapping that provides a translation~~ between a private virtual IP address and a public virtual IP address, said private virtual IP address being configured at said site switch and being associated with said at least one host server corresponding to said site switch; and

providing said ~~mapping information~~ public virtual IP address from said site switch to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as ~~a virtual IP address configured at being associated with~~ said site switch ~~rather than treating said public virtual IP address as a real IP address and to enable said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address~~.

44. (Currently Amended) The article of manufacture of claim 43 wherein the instructions to provide said ~~mapping information~~ public virtual IP address from said site switch to said at least one load balancing controller includes instructions to provide said ~~mapping information~~ public virtual IP address to a load balancing controller located at said load balance switch, ~~to enable said load balance switch to balance traffic among said site switches using said load balancing algorithm~~.

45. (Currently Amended) The article of manufacture of claim 44 wherein the instructions to provide said mapping informationpublic virtual IP address from said site switch to said at least one load balancing controller further includes instructions to provide said mapping informationpublic virtual IP address to a load balancing controller located at said site switch, to enable said site switch to balance traffic among sitesplural ones of said at least one host server corresponding to associated with said site switch and associated with said private virtual IP address.

46. (Currently Amended) The article of manufacture of claim 43 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address, said at least one metric is including an active bindings metric that prefers a virtual IP address, associated with any ofconfigured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

47. (Currently Amended) An article of manufacture, comprising:
a machine readable storage medium at a load balance switch and having instructions stored thereon that are executable by a processor to provide said load balance switch to enable load balancing among host servers using asaid load balance switch and a plurality of site switches that each couple at least one of the host serversserver to a network, by:

receiving, at said load balance switch, mapping information indicative of a mapping between apublic virtual IP address andthat is mapped to a private virtual IP address configured at one of said site switches, said private virtual IP address being associated with said at least one host server corresponding to said site switch;

updating an address record of said load balance switch to indicate said received public virtual IP address as ~~a virtual IP address configured at being associated with~~ said site switch ~~rather than treating said public virtual IP address as a real IP address~~; and

applying, at said load balance switch, at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

48. (Currently Amended) The article of manufacture of claim 47 wherein public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have ~~corresponding~~ indication in said address record as being ~~configured as virtual IP addresses at any of~~ associated with corresponding said site switches, are treated as real IP addresses by said load balance switch and are excluded from having applied thereto any metric of said load balancing algorithm that is usable with virtual IP addresses.

49. (Currently Amended) The article of manufacture of claim 47 wherein the instructions to receive said public virtual IP address, at said load balance switch, said mapping information includes instructions to receive said public virtual IP address at said load balance switch ~~instead of said private virtual IP address from said site switch, which is remote from said load balance switch,~~ for entry into said address record.

50. (Currently Amended) The article of manufacture of claim 47 wherein said at least one metric ~~is~~ includes an active bindings metric that prefers a virtual IP address, associated with any of~~configured at respective~~ said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

51. (Currently Amended) A network device, comprising:

a site switch configurable with a private virtual IP address associated with at least one host server corresponding to said site switch; and

a component in said site switch to obtain mapping information indicative of a mapping that provides a translation between said private virtual IP address and a public virtual IP address,

wherein said site switch is adapted to provide said obtained mapping information public virtual IP address to at least one load balancing controller to enable said load balancing controller to update an address record to indicate said public virtual IP address as a virtual IP address configured at being associated with said site switch rather than treating said public virtual IP address as a real IP address and to enable said load balancing controller to apply at least one metric of a load balancing algorithm to said public virtual IP address.

52. (Previously Presented) The network device of claim 51 wherein said at least one load balancing controller includes a load balancing controller located at a load balance switch remote from said site switch.

53. (Currently Amended) The network device of claim 52 wherein said at least one load balancing controller further includes a load balancing controller located at said site switch and adapted to balance traffic among sites plural ones of said at least one host server corresponding to associated with said site switch and associated with said private virtual IP address.

54. (Currently Amended) The network device of claim 51 wherein public virtual IP addresses received by said load balancing controller as part of reply to a query for network addresses and that do not have corresponding indication in said address record as being configured as virtual IP addresses at any associated with a corresponding one of a plurality of said site switch, are treated as real IP addresses by said load balancing controller and are

excluded from having applied thereto any metric of said-a load balancing algorithm that is usable with virtual IP addresses.

55. (Currently Amended) The network device of claim 51 wherein said public virtual IP address provided to said at least one load balancing controller enables said load balancing controller to apply at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address, said at least one metric is-including an active bindings metric that prefers a virtual IP address, associated with anyconfigured at respective plural ones of said site switch, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring preference of another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

56. (Currently Amended) A network device, comprising:
a load balance switch adapted to receive mapping information indicative of a mapping between-a public virtual IP address and-that is mapped to a private virtual IP address configured at a site switch, said private virtual IP address being associated with at least one host server corresponding to said site switch; and
an address record of said load balance switch to indicate said received public virtual IP address as a virtual IP address configured at being associated with said site switch rather than treating said public virtual IP address as a real IP address,
wherein said load balance switch is further adapted to apply at least one metric, usable with virtual IP addresses, of a load balancing algorithm to said public virtual IP address.

57. (Currently Amended) The network device of claim 56 wherein other public virtual IP addresses received by said load balance switch as part of reply to a query for network addresses and that do not have corresponding-indication in said address record as being configured as virtual IP addresses at any of associated with corresponding said site switches, are

treated as real IP addresses by said load balance switch and are excluded from having applied thereto any said at least one metric of said load balancing algorithm that is usable with virtual IP addresses, and

wherein said public virtual IP address, which is indicated in said address record as a virtual IP address configured at being associated with said site switch, has said at least one metric applied thereto by said load balance switch, if said public virtual IP address is included in said reply to said query.

58. (Currently Amended) The network device of claim 56 wherein said at least one metric is includes an active bindings metric that prefers a virtual IP address, associated with any of configured at respective said site switches, having a maximum number of active ones of said host servers bound to said preferred virtual IP address, rather than preferring preference of another virtual IP address having a number of bound active ones of said host servers that is less than said maximum number.

59. (Currently Amended) The network device of claim 56 wherein said mapping information public virtual IP address received by said load balance switch includes said public virtual IP address instead of said private virtual IP address is received from said site switch, which is remote from said load balance switch.

60. (New) The method of claim 34 wherein said obtaining at said site switch said mapping information includes obtaining at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device.

61. (New) The article of manufacture of claim 43 wherein said instructions to obtain at said site switch said mapping information includes instructions to obtain at said site switch said mapping information from a mapping device that includes a network address translation device or a firewall device.

62. (New) The network device of claim 31 wherein said component in said site switch is adapted to obtain said mapping information from a mapping device that includes a network address translation device or a firewall device.